

REMARKS/ARGUMENTS

Claims 1-11 are pending herein. Claims 1-11 have been amended hereby merely to correct minor matters of form and for clarification purposes only. Applicant respectfully submits that no new matter has been added.

1. Examiner Patel is thanked for courtesies extended to Applicant's representative (Nicole Buckner) during a telephonic interview on March 10, 2004, the substance of which is incorporated below.

2. Applicant appreciates Examiner Patel indicating that claims 3, 4, 6, 8 and 11 are allowed, and that claims 5, 7, 9 and 10 would be allowable but for their dependency upon rejected claims 1 and 2. Applicant respectfully submits that claims 1 and 2 are in condition for allowance for the reasons explained below, and that dependent claims 5, 7, 9 and 10 are also in condition for allowance by virtue of their dependency from claims 1 and 2.

3. Claim 1 was rejected under §102(b) over Kobayashi. Applicant respectfully traverses this rejection.

Independent claim 1 recites a ceramic envelope for a high intensity discharge lamp made of a light transmission ceramic material comprising a cylindrical barrel section forming an electric discharge light emitting space, an annular closing section that closes each end of the barrel section, respectively, and a capillary section for inserting and fixing an electric discharge electrode to be outwardly protruded so as to be opposed to each other extending from a substantially central position of each closing section. The barrel section thickness of at least one boundary section between the barrel section and each closing section is continuously increased at a ratio from 1.2 to 2.0 relative to the thickness of the barrel section in the vicinity of the center of the electric discharge light emitting space.

In the Office Action, Examiner Patel asserted that Figs. 6 and 10 of Kobayashi show a ceramic envelope including a "cylindrical barrel section (32), an annular closing section (33a, 33b), a capillary section (for inserting and fixing electrodes). The thickness of boundary sections to the thickness of center section is continuously increased at a ratio from 1.2 to 2.0 (see lines 43-47 of column 3)" (Office Action, page 2, lines 8-11). Applicant respectfully disagrees.

Based on the element designations in the Office Action, Applicant respectfully submits that Kobayashi does not disclose each and every element recited in independent claim 1. For example, if elements 33a, 33b of Kobayashi's Fig. 10 are taken to be annular closing sections, as Examiner Patel asserted, then Applicant respectfully submits that Kobayashi does not include the capillary sections recited in claim 1.

On the other hand, if the PTO were to assert that elements 33a, 33b of Kobayashi's Fig. 10 instead correspond to capillary sections, then Applicant respectfully submits that Kobayashi does not show a boundary of continuously increasing thickness between the barrel section 32 and ~~an~~ annular closing sections (which could, at best, be broadly considered to be the tapered end portions of the barrel section 32). That is, although the tapered end portions of the barrel section 32 appear to have a continuously increasing wall thickness, at least in the left-hand portion of Kobayashi's Fig. 10, the thickness of the barrel section at the boundary between the barrel section 32 and the tapered end portions does not continuously increase, as recited in claim 1. To the contrary, that boundary is defined not by a change in thickness, but by an angle separating the barrel section 32 from the tapered end portions which then increase in thickness at a point beyond the boundary, but not at the boundary, as claimed.

During the telephonic interview, Examiner Patel tentatively agreed that, in view of the foregoing, Kobayashi does not disclose each and every element recited in claim 1. Accordingly, Applicant respectfully submits that claim 1 defines patentable subject

matter over Kobayashi, and respectfully requests that the above rejection be reconsidered and withdrawn.

4. Claim 2 was rejected under §102(b) over Danno. Applicant respectfully traverses this rejection.

Independent claim 2 recites a ceramic envelope for a high intensity discharge lamp made of a light transmission ceramic material comprising a cylindrical barrel section forming an electric discharge light emitting space, an annular closing section that closes each end of the barrel section, respectively, and a capillary section for inserting and fixing an electric discharge electrode to be outwardly protruded so as to be opposed to each other extending from a substantially central position of each closing section. A ratio of an inner diameter of the barrel section, in the vicinity of an end of the barrel section, to an inner diameter of the center of the barrel section is at least 0.8 and less than 1.0.

In the Office Action, Examiner Patel asserted that Danno discloses a ceramic envelope including "a cylindrical barrel section (12), an annular closing section (14), a capillary section (for inserting and fixing electrodes). A ratio of inner diameters in vicinity of an end of the barrel section to center of the barrel section is within 0.8-1" (Office Action, page 2, lines 16-19). Applicant respectfully disagrees.

Based on the element designations in the Office Action, Applicant respectfully submits that Danno does not disclose each and every element recited in claim 2. For example, if elements 14a, 14b of Danno's Fig. 1 are taken to be annular closing sections, as Examiner Patel asserted, then Danno does not disclose that the ratio of the diameter of the end portion of the barrel section 12 (i.e., a portion of 12 just prior to 14a, 14b) to the center portion of the barrel section 12 is in a range of 0.8 to less than 1. That is, as shown in Danno, the barrel section 12 is "a straight tube section 12 of a predetermined diameter" (see Danno, Col. 3, lines 13-14), and the ends of the barrel section 12 have the same diameter as the center part thereof.

Further, Column 4, lines 63-66 of Danno recite that the alumina ceramic tube used in the example includes a "straight tube section of an inner diameter of 10 mm and a tube end section having a minimum inner diameter D of 7.25 mm" (see Danno's Fig. 1). In that manner, in order to satisfy the diameter ratio limitation of claim 2, the tube end sections 14a, 14b of Danno's Fig. 1 must necessarily be considered part of the barrel section, and not annular closing sections as Examiner Patel asserted. In that case, however, even if the PTO were to assert that elements 16a, 16b of Danno instead correspond to the annular closing sections (such that elements 14a and 14b correspond to tapered end portions of the barrel section 12), Applicant respectfully submits that Danno does not include capillary sections made of a light transmission ceramic material, as recited in claim 2.

For at least the foregoing reasons, Applicant respectfully submits that Danno does not disclose each and every element recited in independent claim 2. Accordingly, Applicant respectfully submits that claim 2 thus defines patentable subject matter over Danno, and respectfully requests that the above rejection be reconsidered and withdrawn.

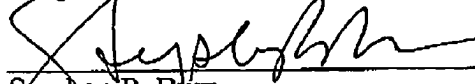
If Examiner Patel believes that contact with Applicant's attorney would be advantageous toward the disposition of this case, he is herein requested to call Applicant's attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

March 12, 2004

Date

Respectfully submitted,


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